

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/053213 A1

(51) International Patent Classification⁷: **H04L 1/00**

[KR/KR]; 725-503 Hyundai Apt., Yeongtong-dong, Yeongtong-gu Suwon-si, Gyeonggi-do 442-470 (KR).

(21) International Application Number:
PCT/KR2004/003060

(74) Agent: **LEE, Young-Pil**; The Cheonghwa Building, 1571-18, Seocho-dong, Seocho-gu, Seoul 137-874 (KR).

(22) International Filing Date:
25 November 2004 (25.11.2004)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2003-0085770
28 November 2003 (28.11.2003) KR

(71) Applicant (*for all designated States except US*): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742 (KR).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

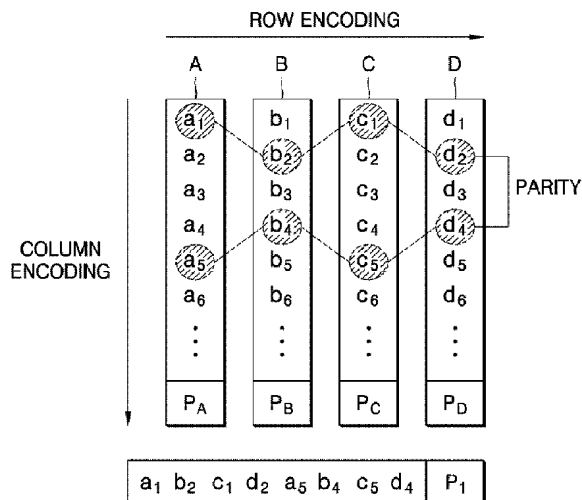
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **KIM, Ki-Hyun** [KR/KR]; 103-1103 Mugigae Maeul Daelim Apt., Gumi-dong, Bundang-gu Seongnam-si, Gyeonggi-do 463-703 (KR). **KIM, Hyun-Jung** [KR/KR]; 102-1108 Samcheonri 2-cha Apt., Gwonseon-dong, Gwonseon-gu Suwon-si, Gyeonggi-do 441-390 (KR). **LEE, Yoon-Woo**

Published:
— with international search report

[Continued on next page]

(54) Title: METHOD OF GENERATING PARITY INFORMATION USING LOW DENSITY PARITY CHECK



(57) Abstract: The present invention relates to a method of independently generating row parity information and column parity information in an encoding process using a low density parity check (LDPC) matrix. The method comprises: generating code word vectors by generating column parity information using a parity check matrix and message information; selecting code word bits for generating row parity information among code word bits in the generated code word vectors; and generating the row parity information using the selected code word bits, wherein the selecting of the code word bits comprises: excluding code word bits related to the generation of other row parity information. Accordingly, independent parity information can be generated by generating row parity information on the basis of code word bits without related to generation of column parity information.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.